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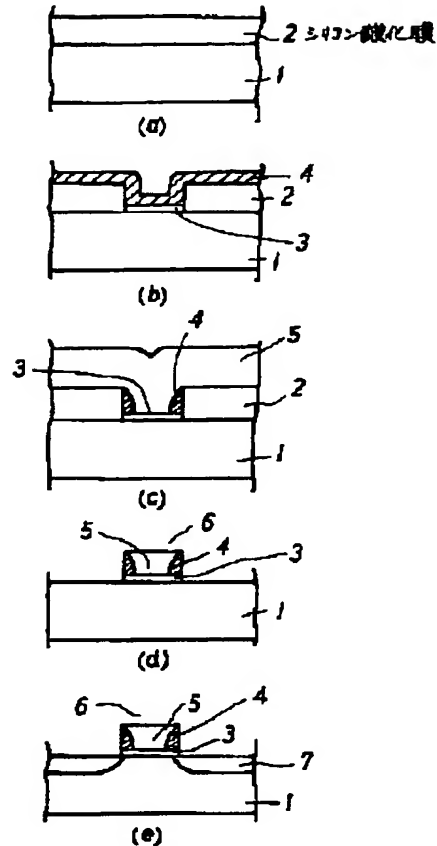
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TITLE : MOS TRANSISTOR AND ITS
MANUFACTURE



ABSTRACT : PURPOSE: To make it possible to adjust the threshold value without ion implantation by forming a portion in contact with a gate oxide film of a gate electrode with materials having different work functions.

CONSTITUTION: The first silicon oxide film 2 with a predetermined film thickness is formed on a semiconductor substrate 1 to perform patterning, and it is etched and the surface of the semiconductor substrate 1 is exposed. The second silicon oxide film 3 is used as a gate oxide film if formed on the exposed surface, and the first gate electrode material 4 is deposited on the first and second silicon oxide films 2 and 3. Next, the first gate electrode material 4 is etchbacked, a sidewall is formed, the second gate electrode material 5 having the work function different from that of the first gate electrode material 4 is deposited on the first and second silicon oxide films 2 and 3 and the first gate electrode material 4, and a gate electrode 6 are formed after patterning. By doing this, it becomes possible to easily change the threshold voltage without affecting the current characteristics.

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